

REMARKS

In the Office Action, claims 1-4, 8-9, 11 and 14 are rejected under 35 U.S.C. §102(b) as being anticipated by Shukuri et al., claims 17 and 18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shukuri et al., claims 5-6 and 15-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shukuri et al. in view of Veerasamy, claims 7, 10 and 12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shukuri et al. in view of Parker, and claims 11 and 13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shukuri et al. in view of Newby et al.

As pointed out in the response to the first office action filed on 6/25/2008, the gist of the invention as compared to the known conventional techniques and cited prior arts is that **the solution layer is not heated to dry until the second planar glass sheet is placed over the support means. As a result, the support means are not affixed firmly on the planar glass sheet during the manufacturing process.** In other words, the two ends of the support means can move freely in the evacuated glass panel and the support means are positioned and supported temporarily on the planar glass sheet by **the liquid immersion and surface tension** of the solution layer.

In order to clearly compare Claim 1 of the present invention with Shukuri et al., in the following discussion applicants provide Figure 1 to illustrate the technique used in Shukuri et al. and Figure 2 to describe the method of Claim 1 of the present invention.

Specifically, Shukuri et al. disclose a method for fixing the spacer distributed on the glass panel (col. 11, lines 1-45). The method is achieved by four steps. As shown in

Figure 1, Step 1 is to mix and make the low melting glass 1 and pine oil 2 into the glue 3 at first; then step 2 is to print the glue silk 3 on the one glass panel 4; step 3 is that the spacers 5 made up of the low melting glass 1 is formed by sintering. After these steps, the one end of the spacers 5 is fixed on the one glass panel 4 by the low melting glass 1 and the other end of the spacers 5 can move freely relative to the surface of the other glass panel 6.

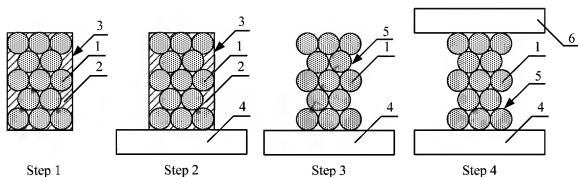


Figure 1

The technique disclosed by Shukuri uses sintering to make one end of the spacers 5 fixed on the surface of the glass panel 4 after the low melting glass 1 melts. The contact area between the spacers 5 and the one glass panel 4 is increased so that the other end of the spacers 5 can move freely relative to the surface of the other glass panel 6 in order to prevent relatively movement and damage resulted from temperature difference between the glass panel 4 and the glass panel 6.

By comparison, Claim 1 of the present invention discloses a method for fixing support means into the evacuated glass panel by four steps. As shown in Figure 2, step 1 is that a solution layer 2 is applied on a surface of one planar glass sheet (glass panel 4);

then step 2 is that the support means (spacers 5) are placed on the solution layer 2; and step 3 is that the upper surface of the support means (spacers 5) is covered with the other planar glass sheet (glass panel 6); and step 4 is to heat the solution layer 2 to dry so as to fix the support means (spacers 5) between planar glass sheets (glass panel 4 and glass panel 6).

The support means (spacers 5) are **stably positioned by the liquid immersion and surface tension of the solution layer 2** to prevent the support means (spacers 5) from moving at the following manufacture steps. At the process of sealing the edge of the evacuated glass panel with high temperature, the solution layer volatilizes all or partly and only a little of the solution (buffering layer 7) remains in the bottom of the support means (spacers 5).

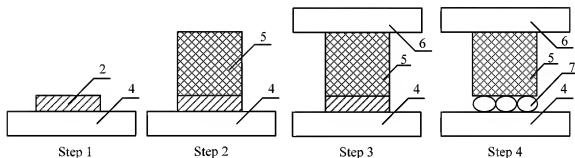


Figure 2

Therefore, the difference between Claim 1 of the present invention and the art disclosed by Shukuri et al. is evident in that the support means of Claim 1 are not affixed firmly on one of the planar glass sheet during the manufacturing process and the solution layer is heated only after the other planar glass sheet has been placed. Shukuri et al., however, heat the paste first by sintering to form spacers firmly fixed on one of the glass

sheet before the other planar glass sheet is placed together. The solution layer of Claim 1 can support and prevent the support means from moving at the following manufacture steps without having to sinter and firmly fix the support means. Cracks from excessive pressure are thus avoided for the manufactured evacuated glass panel of the invention. At the process of sealing the edge of the evacuated glass panel with high temperature, the solution layer volatilizes and only a little of the solution remains in the bottom of the support means.

In the office action, the examiner cites Shukuri et al. to reject Claim 1 on the ground that Shukuri et al. do disclose the limitations of the present application because the claims of the present invention do not impose a specific order on the performance of the method steps. In response, the above amendment specifically adds the limitations of **said support means being stably positioned between said first and second planar glass sheets by liquid immersion and surface tension of said solution layer and wherein each of the above steps is performed in sequential order** in the amended Claim 1.

As can be seen from the citation (col. 11, lines 31-45 of Shukuri et al.) made by the examiner, “*the formed paste-formed members 8 are heated together with the second glass sheet 1B so as to form pre-space forming members 30 by baking*” which hardens the solution layer (paste-formed members) is clearly different from the amended Claim 1 in which the support means continue to be **stably positioned between said first and second planar glass sheets by liquid immersion and surface tension of said solution layer** before the final heating step. Applicants respectfully contend that the fact that the

solution layer remains liquid when the second planner glass sheet covers the support means and each of the steps is performed in sequential order has unambiguously distinguished the amended Claim 1 over the teaching of Shukuri et al.

In conclusion, the amended Claim 1 of the present invention is novel compared to Shukuri et al. None of the arts disclosed by Veerasamy, Parker and Newby et al. teaches the instant invention as claimed in the amended Claim 1. At the same time, the subject matter as claimed in the amended Claim 1 of the present invention is not obvious to those skilled in the art. Applicants respectfully submit that amended Claim 1 is allowable over the cited prior arts under 35 U.S.C. §102(b) and 35 U.S.C. §103(a). By virtue of dependency, claims 2-18 should also be allowable.

The foregoing discussion has shown that the instant invention differs from the cited prior arts. The amended claims 1-18 are in full condition. Prompt and favorable reconsideration of the application is respectfully solicited.

Respectfully submitted,

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